

Abstract:

An apparatus for creating therapeutic charge transfer in tissue includes a coil. The coil generates a changing magnetic field to induct an electric field in the tissue

5 exceeding 10 mV/cm when the coil is 5 cm from the tissue.

Preferably, the magnetic field has a growth phase and a decay phase and a duration of the growth phase is at least ten times a duration of the decay phase. The apparatus can include a control circuit to control a current fed to the coil. The

10 control circuit includes two subcircuits and a switch for switching between a first of the subcircuits and a second of the subcircuits; preferably, a  $\lambda$  of the second subcircuit is at least ten times a  $\lambda$  of the first subcircuit. To generate the therapeutic effect, the coil should have a duty cycle of

15 at least ten percent.